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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,653	11/24/2003	Kazuo Teshirogi	032131	1182

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EXAMINER

GOFF II, JOHN L

ART UNIT PAPER NUMBER

1733

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/718,653

Applicant(s)

TESHIROGI ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 4-14, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the amendment filed on 7/6/06. The previous 35 USC 102 rejection over Nagatomi et al. (JP 54124968 and the abstract) is withdrawn in view of applicants amendment.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 103***

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagatomi et al. (JP 54124968 and the abstract) in view of either one of Inada et al. (JP 06104317 and the abstract) or Shoffner (U.S. Patent 3,749,621) and optionally Pool (U.S. Patent 3,501,128).

Nagatomi et al. disclose a method of manufacturing a semiconductor element comprising providing a semiconductor substrate (3 of Figure 3), placing an adhesive film (4 of Figure 3) on a surface of the semiconductor element, providing a cylindrical roller (15 of Figure 3) having a

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heat-generating part (15c of Figure 3) in a central portion of the roller extending in an axial direction of the roller, pressing the roller heated to a laminating temperature onto the adhesive film, rolling the roller the length of the adhesive film to laminate the adhesive film to the semiconductor substrate, and dividing the semiconductor substrate into a plurality of semiconductor elements (See the abstract). Nagatomi et al. do not disclose the cylindrical roller is formed of metal having an outermost layer of elastically deformable fluoride resin provided thereon. Inada et al. directed to forming a TAB tape, i.e. a tape automated bonding tape which is used to adhere semiconductor elements, teaches pressing the tape with a heated pressing roll comprising a metal body with an outer Teflon, i.e. fluoride resin, layer thereon such that the adhesive of the tape does not stick to the roller (See the abstract). Shoffner disclose a pressing roller for securing a covering wherein the roller comprises a metal body with an outer Teflon, i.e. fluoride resin, layer thereon, e.g. having a thickness of 0.01 to 0.09 in., such that the roller is free of adhesion to other surfaces and is resistant to corrosion (Column 1, lines 43-50 and Column 3, lines 74-75 and Column 4, lines 1-5 and Column 5, lines 21-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the body of the cylindrical roller taught by Nagatomi et al. those well known in the art as shown by either one of Inada et al. or Shoffner to laminate the adhesive film without the adhesive sticking to the roller and the roller being resistant to corrosion.

Regarding the limitation of an “elastically deformable resin layer” and “absorbing unevenness of the outer surface of the roller and unevenness of a surface of the film by elastic deformation of the elastically deformable resin”, it is noted Teflon is well taken in the art as an elastically deformable material as shown by Pool (Column 3, lines 33-35). One of ordinary skill

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in the art at the time the invention was made would have readily appreciated that the outer layer of Teflon taught by Nagatomi et al. as modified by either one of Inada et al. or Shoffner is elastically deformable as optionally shown by Pool such that the layer would absorb unevenness of the outer surface of the roller and unevenness of a surface of the film by elastic deformation as the elastically deformable outer layer including its thickness is consistent and in agreement with applicants claims and specification (See page 15, lines 16-19 and 34-37) as suitable for absorbing unevenness in this manner.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagatomi et al., either one of Inada et al. or Shoffner, and optionally Pool as applied to claims 1-3 above, and further, in view of the admitted prior art (Specification pages 1-3).

Nagatomi et al., either one of Inada et al. or Shoffner, and optionally Pool as described above teach all of the limitations in claim 15 except for a specific teaching of thinning the adhering surface of the semiconductor substrate. The admitted prior art is directed to laminating an adhesive film onto a surface of a semiconductor substrate wherein the semiconductor substrate surface is thinned, e.g. by grinding, prior to lamination (Figure 1 and Page 1, lines 26-33 and Page 2, lines 31-37 and Page 3, lines 1-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in Nagatomi et al. as modified by either one of Inada et al. or Shoffner and optionally Pool to include a step of thinning the adhering surface of the semiconductor substrate prior to lamination as was well known in the art as shown by the admitted prior art to form semiconductor elements having a reduced thickness.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-3 and 15 have been considered but are moot in view of the new ground(s) of rejection. The amended claims including the newly added limitations are addressed in the rejections above. Applicants argue, "The Teflon or silicone film of the **Inada *et al.*** reference does not have such a function to absorb unevenness in the pressure contact surfaces. The Teflon or silicone film of the **Inada *et al.*** reference is a thin film coating, which does not provide elastic deformation." The claims are not commensurate in scope with this argument as the claims do not require a particular thickness of the Teflon coating. In any event, Pool is cited above to show it is well taken in the art that Teflon is elastically deformable and Shoffner is further cited to show Teflon coatings for pressure rolls having a thickness including those disclosed in applicants specification such that clearly the outer Teflon layer taught by Nagatomi et al. as modified by either one of Inada et al. or Shoffner and optionally Pool would function to absorb unevenness in the pressure contact surfaces.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

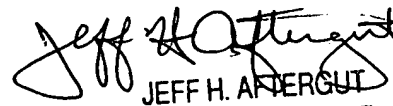
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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